PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal at the intersection of MD 355 and Watkins Mill Road in Montgomery County. The existing strain pole Traffic Signal shall be replaced with a new mast arm Traffic Signal. Additionally, video detection shall be used for all approaches. Countdown pedestrian signals with audible pushbuttons shall be installed across the north, east and west legs of this intersection. MD 355 is assumed to run a north-south direction.

II. INTERSECTION OPERATION

- 1. The intersection shall operate in a NEMA six-phase, semi-actuated mode, with the MD 355 approaches running concurrently. Exclusive/Permissive left turns shall remain for the south approach of MD 355. The northbound approach of MD 355 shall be changed to an exclusive left turn phase. A concurrent right turn shall be provided for southbound MD 355. The Watkins Mill approaches shall operate as a side street split. Countdown pedestrian phases with audible push button activation shall be provided across the north, east and west approaches.
- 2. A full-traffic-actuated, eight-phase controller with video interface and all necessary equipment housed in NEMA size "6" base-mounted cabinet shall be installed at this intersection.
- 3. The Montgomery County Signal Shop shall install an APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the Montgomery County Signal Shop for testing and programming. (Keith Lord (301)279-1291)

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- 2. Disconnecting and splicing of interconnect cable shall be performed by Montgomery County Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. All controller cabinet wiring will be performed by Montgomery County Forces. Contact Kamal Hamud at (240) 777-8761 seventy-two hours in advance of intended work.
- 3. All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

IV. APS will function as follows:

FOR WATKINS MILL ROAD

- a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce "Wait to cross Watkins Mill at Frederick."
- b. When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

FOR FREDERICK AVENUE

- a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce "Wait to cross Frederick at Watkins Mill."
- b. When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

The contact persons for District #3 (Montgomery County) are as follows:

Mr. Jeff Wentz Assistant District Engineer - Traffic Phone: (301) 513-7358 Mr. Vernon Stinnett Jr.

Assistant District Engineer - Maintenance Phone: (301) 513-7304

Mr. Augie Rebish District Engineer - Utility Phone: (301) 513-7350

Mr. Richard L. Daff, Sr. Chief, Traffic Operations Division Phone: (410) 787-7630

Mr. Keith Lord Chief, Montgomery County Signal Shop 301-279-1291

Mr. Kamal Hamud Mont. County TMC Center 240-777-8761

Mr. Sonny Bailey Chief, Sign Shop 410-787-7676

The power company representative is:

Mr. Steve Custer PEPCO Customer Design 201 W Gude Dr. Rockville, MD 20850 Phone: 301 548-4333

EQUIPMENT LIST (CONT.)

EQUIPMENT TO BE SUPPLIED BY THE SHA & INSTALLED BY THE CONTRACTOR

SPEC. NUMBER	DESCRIPTION	QUANTITY	
971017	EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET- BASE MOUNT	1	EA
973023	SHEET ALUMINUM SIGNS GROUND MOUNTED	43	SF
	R1-1 "STOP" SIGN. (36" X 36")	4	EA
	Pedestrian education R10-3(1) sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO CROSS FREDERICK RD".)	2	EA
	Pedestrian education R10-3(1) sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO CROSS WATKINS MILL RD".)	4	EA
973023	SHEET ALUMINUM SIGNS OVERHEAD MOUNTED	158	SF
	D3-(1) "Frederick RD 900> / Frederick RD <900" sign, (variable x 16") dual faced. (mast arm mount)	2	EA
	D3-(1) "Watkins Mill RD 100> / Watkins Mill RD <100" sign, (variable x 16") dual faced. (mast arm mount)	2	EΑ
	R3-5R "RIGHT TURN ONLY" sign, (30" x 36") (mast arm mount)	3	EA
	R3-5L "LEFT TURN ONLY" sign. (30" x 36") (mast arm mount)	3	EA
·	R3-6 "LEFT TURN AND THRU" sign: (30" x 36") (mast arm mount)	1	EA
	GUIDE SHIELD ASSEMBLY (48"x72") pole mounted, NORTH / MD 355 / LEFT ARROW	1	EA
	GUIDE SHIELD ASSEMBLY (30"x48") pole mounted. SOUTH / MD 355 / RIGHTARROW	1	EA
	GUIDE SHIELD ASSEMBLY (48"x72") pole mounted. SOUTH / MD 355 / LEFT ARROW	1	EA
	GUIDE SHIELD ASSEMBLY (30"x48") pole mounted. NORTH / MD 355 / RIGHT ATRROW	1	EΑ

EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR QUANTITY DESCRIPTION

114280	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS. ANY WIDTH	575	LF
203030	TEST PIT EXCAVATION	12	CY
210026	REMOVAL OF EXISTING SIDEWALK	1	CY
585621	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT 1 MARKING LINES	125	LF
585625	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	370	SF
655105	5 INCH CONCRETE SIDEWALK	50	SF
655120	DETECTABLE WARNING SURFACE FOR CURB RAMPS	10	EA
800000	16" Countdown pedestrian signal head.	6	EA
800000	TERRA INTERFACE PANEL	1	EA
800000	TERRA ACCESS POINT	1	EA
800000	TERRA VIDEO CAMERA DETECTOR WITH CONTROL CABLE (UP TO 500').	4	EA
800000	2-WIRE CONTROL UNIT	1	EA
800000	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS	6	EA
800000	1 CONDUCTOR NO 250 KCMIL CU USE CABLE	50	EA
800000	REROUTE INTERCONNECT CABLE.	20	EA
800000	4" SCHEDULE 80 PVC - TRENCHED & 3" SCHEDULE80 PVC 1 IN SAME TRENCH	310	LF
800000	2-4" SCHEDULE 80 PVC BORED (2ND CONDUIT IN SAME BORE)	380	LF
800000	4" SCHEDULE 80 PVC (2ND CONDUIT IN ONE TRENCH)	680	LF
801004	CONCRETE FOR SIGNAL FOUNDATION 2	26.5	CY
802001	TUBULAR STEEL 6 INCH X 4 INCH X 3/8 INCH GALVANIZED POST	4	LF
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	875	LF
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	55	LF
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	180	LF

805140 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED

900 EA

EQUIPMENT LIST (CONT.)

EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

U•	EGGIT MENT TO BE I GRATSHED AND OR THIS FALLED BY THE CONTROL	ACTOR	
SPEC. NUMBER	DESCRIPTION	QUANTITY	
805160	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE	45 LF	
807202	METERED SERVICE PEDESTAL	1 EA	
810022	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN	115 LF	
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	25 EA	
813014	INSTALL GROUND MOUNTED SIGN	42 SF	
813015	INSTALL OVERHEAD SIGN	158 SF	
818004	10 FOOT BREAKAWAY PEDESTAL POLE	6 EA	
818036	STEEL POLE WITH A SINGLE 50 FOOT MAST ARM	1 EA	
818041	STEEL POLE WITH A SINGLE 60 FOOT MAST ARM	2 EA	
818052	STEEL POLE WITH SINGLE 70 FOOT MAST ARM	1 EA	
831010	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE	4 EA	
837001	GROUND ROD -3/4INCH DIAMETER X 10 FOOT LENGTH	11 EA	
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	54 EA	
861104	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)	2650 LF	
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	1470 LF	
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	2475 LF	
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	2080 LF	
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)	1045 LF	
862101	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)	760 LF	
862102	SAW CUT FOR SIGNAL (LOOP DETECTOR)	280 LF	
866103	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	4 EA	
873001	REMOVE AND SALVAGE EXISTING EQUIPMENT	LUMP SUM	



STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

MD 355 (N. FREDERICK AVE) AND WATKINS MILL ROAD

GAITHERSBURG, MARYLAND

GENERAL INFORMATION SHEET



400 Crain Hwy., N.W. Glen Burnie, MD 21061 Ph (410) 590-5500 Fax (410) 590-6637

SCALE NONE DATE 11/2/09 CONTRACT NO. BW996M82 DESIGNED BY R R ZACHERL COUNTY MONTGOMERY ₩ J NIES DRAWN BY LOGMILE CHECKED BY TIMS NO. ____J905 F.A.P. NO. TOD NO. TS NO. 2083B DRAWING NO. 5 OF 6 SHEET NO.

PLOTTED: \$DATETIME\$ FILE: \$FILE\$

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